

LIEUT. WYMAN KILLED IN AIRPLANE ACCIDENT

Technology Graduate Enlisted in
Royal Flying Corps in 1917—
Was About to Leave for Active
Service in France

FELL TRAINING IN ENGLAND

News has just been received of the death of Lieutenant Alfred Theodore Wyman, of the class of 1916, in an airplane accident in England. No details of his death have been received, other than the fact that the aviator fell



LT. ALFRED T. WYMAN '16

from a great height in the air, after an accident had happened to the machine in which he was flying. Wyman was about to leave for the front in France, as a full-fledged aviator, having practically completed his course of instruction.

"Regret to inform you Lieut. Wyman killed in aero accident in England, May 27," was the brief notice received by Mrs. Flora M. Wyman, mother of the aviator, but this terseness was well relieved by a letter of condolence from the British Admiralty which followed the telegram.

Lieut. Wyman's mother had received a letter from her son a few days before the fatal notice, telling that he had received his "wings," denoting that he had been made a full-fledged aviator. He wrote that he was in good health and happy.

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SHIPYARD NOTICE

All the men who have signed up for the Bath shipyards and who are to leave for Maine this week should meet at the North Station, Boston, on Saturday morning, June 8, in time for the 9.00 o'clock Portland train. It is very important that everyone meet at this time so that the Bath quota of men will go to the shipyard together. There will be no Friday night steamboat leaving Boston for Portland or Bath, so that the Saturday train offers the best and probably the only means of reaching the shipyards in time.

There will be an important meeting for the men assigned to Bath at the Bath Y. M. C. A. on Saturday afternoon at 5.00 o'clock. This applies to the men at both shipyards and everyone should make it a point to attend in order that the men may get settled immediately.

PRESIDENT WILSON ORDAINS NEW SERVICE DISTINCTIONS.

Service Cross and Medal to be Issued
for Individual Bravery.

The members of the American Expeditionary Forces who distinguish themselves for bravery during their service in France are to be rewarded by a new Distinguished Service Cross, just authorized by a special order of President Wilson's on January 12, 1918, and which is now ready to be issued by the Government. The order authorizes the Cross to be presented to any person, male or female, who distinguishes himself or herself by "extraordinary heroism in connection with military operations against an armed enemy of the United States under circumstances which do not justify the award of the Medal of Honor granted by Congress." In the past there has been much discussion as to the advisability of granting such a Cross. The Congressional Medal of Honor previous to this was the mark of distinction granted, but this medal is given only in exceptional cases of bravery, and those who were in favor of additional marks of distinction cited as examples the different ones awarded by the Allied governments to their soldiers and sailors. For instance, England grants as her highest honor the Victoria Cross, while France gives the Cross of The Legion of Honor, but both of these governments have numerous other distinguished service medals.

The new Distinguished Service Cross is of bronze and on each arm it has a small oak leaf surmounted by a star. The cross itself is surmounted by the national emblem, the spread eagle, while below the horizontal arms, on each side the vertical one there is a small scroll on which is inscribed "E Pluribus Unum." In the same order, a Distinguished Service Medal was also authorized. This medal is to rank just below the Cross, and is to be granted for "exceptionally meritorious service." Already thirty-six officers and men have been recommended for the Distinguished Service Medal, while thirty-two have been recommended for the Cross for their conduct in the Battle of Seicheprey on April 20 and 21.

UNIVERSITY UNION

Women's Auxiliary Affords Much Aid to Boys in Service

In a recent issue of THE TECH, the announcement was made that the Rev. George Crocker Gibbs '00 had succeeded Mr. Van Ransselaer Lansingh '98 as director of the Technology Branch of the American University Union in Paris. The growth of this war work has been so extremely rapid that it has grown to large proportions before many people realized that it existed. Slightly less than a year ago the American University Union was inaugurated with ten American institutions represented. Technology was one of the ten. Immediately the idea boomed. Besides the Paris Union and the London branch, plans are nearly complete for one in Italy, probably at Rome. The Paris headquarters are at the Royal Palace Hotel, 8 rue de Richelieu, where the entire hotel has been reserved for the exclusive use of the Union under an adequate guarantee of room rentals and turnover. In London the office is located 16 Pall Mall East, London, S. W. 1. By April 1, 1918, well over 5000 college men had already been registered, representing practically all American colleges, including West Point and Annapolis.

The purposes of the Union are briefly as follows: "to meet the needs of American university and college men and their friends who are in Europe for military or other service in the cause of the Allies;" and "to co-operate in all proper ways with University authorities in the United States for the general well-being of American university and college men who come to France." A survey of the work done would include the contracting for the exclusive use of an entire hotel for transient college men providing of entertainments such as teas, concerts, and dinners, the collection of a library of useful books, the secur-

(Continued on page 3)

TECHNOLOGY MERMEN COMPETE AT REVERE

Swimming Team Members Place
in N. E. A. A. Individual
Championship Races — Unter-
see Defeated

50-YARD RECORD BROKEN

The last contest of the swimming season took place on May 31 at Ocean Pier Bath, Revere, Mass., in the form of the New England Amateur Athletic Association Union Individual Championship Swimming Meet, although the season



CAPT. MAX UNTERSEE '19

had officially ended some weeks ago. Many different events were run off, but the only ones of interest, in so far as competition by representatives of Technology, were the 50 and 220-yard championship dashes, and the service relay.

The most hotly contested event of the meet was the 50-yard dash, in which Bidell of Boston English High tied for first with Max Untersee '19. Bidell is the captain of his school swimming team and has gained a reputation of being one of the best amateur swimmers around the Hub. To decide the winner of the dash a runner-off was held, in which Untersee lost out to the school-boy merman. C. W. Scranton, a Technology man of the class of 1918 who has enlisted in the Navy, took third place in this race. Bidell established a new record for the 50-yard race in the runner-off, making the remarkable time of 25 2-5 seconds.

In the 220-yard dash, Greene '21, captain of the 1921 swimming team, swam neck-and-neck with Bidell for practically the whole race and had an excellent chance of winning out by one of his famous finishes when the English swimmer was fouled by another contestant and awarded the race. R. Bolan '19 took third place on this contest.

In the service relay race, Scranton and Greene, who has enlisted in the Navy, but has not yet been called swam on the team which came in second after a close struggle.

DIPLOMAS FOR CANDIDATES FOR CO-OPERATIVE DEGREES

Candidates who are not able to be present at the Harvard commencement exercises at Sanders Theatre on June 20, can obtain their diplomas after Commencement Day by applying to the Secretary, Professor Merrill.

ALFREDE E. BURTON, Dean.

TECHNOLOGY MILITARY UNITS MUST OBSERVE INSIGNIA RULES.

Infraction of Government Regulations
Liable to Lead to Punishment.

The following memorandum, dated June 1, 1918, has been issued by the Department of Military Science.

"It having been brought to my attention that some members of the various Technology military organizations have been wearing the collar insignia of various arms of the service, in addition to the letters 'M. I. T.' or 'R. O. T. C.' they are hereby warned that such wearing of insignia is absolutely forbidden and liable to subject the wearer to arrest and punishment. This does not, of course, apply to the single Engineer button authorized for members of the Engineer Enlisted Reserve.

"Men are further warned that those who have graduated, or otherwise separated themselves from the Technology military organizations, are not privileged to wear any uniform by reason of having been in such organizations, and such wearing of uniforms will subject them to the same serious punishment as if they had never been privileged to wear uniform. This does not apply of course, to men still in the organizations but on vacation.

"EDWIN T. COLE,
Major, U. S. Army, Ret.,

6 GRADUATES COMMISSIONED AFTER 3 WEEKS OF TRAINING

Three weeks ago, six students of Technology left the Institute to attend the Engineers' Training Camp at Fort Lee, Virginia. Today, these six are highly elated over the results of their three weeks intensive training, and are happily sporting the gold bars of Second Lieutenants in the Engineer Corps, National Army. The successful candidates for commissions are: J. S. Carter '19, J. H. Chase '18, M. Pierce '18, C. H. Wilkins '14, H. L. Wirt '18, and W. Wyer '18. In a letter to THE TECH, Wyer said, referring to the men's commissions, "We got them, firstly, because we were graduates of Technology, and secondly, because we knew Infantry Drill pretty well. Therefore, in spite of what I thought at the time, I surely am blessing summer camp drill."

ECLIPSE OF SUN

First Total Eclipse for 18 Years Will Be Visible in South

At 3.55 in the afternoon of June 8 (Pacific time) a huge circle of darkness, black as night, a jet disk seventy miles in diameter, will rush in from the ocean to the mouth of the Columbia River, and continue thence across the continent to the Atlantic Ocean. The huge circle cut from the garment of night will sweep across the American Desert and the Rockies, gradually shrinking in diameter as it goes; it will stride the Mississippi at 6.37, (Central time,) and pass a few minutes later across Southern Alabama and Florida. Then once more, now measuring only forty-four miles across, it will rush out from the Florida beaches into the Atlantic Ocean and vanish.

If anyone standing near the mouth of the Columbia River, instead of going out over the ocean, looks up into the western sky (with a piece of smoked glass to temper the sunlight) he will see this: Almost an even hour before the coming of the huge moving inkblot there will be a faint indentation of blackness on the rim of the sun, which will steadily grow, always with a rounded outline, cutting off more and more of the solar disk and the solar radiance until, just as the circle of darkness sweeps inland from the ocean, the sun's whole disk will be blackened; and, for something over two minutes, the sun will be blotted out. The sky will take the hue of night; the brighter stars will shine out; the constellations that illumine our Winter skies; Orion, or at least its greater luminaries, Betelgeux and Rigel and, perhaps, the Giant's Belt, will be clearly seen, with Aldebaran, the red eye of Taurus the Bull; and, at the top

(Continued on page 4)

TECHNOLOGY TAKES SIXTH IN BIG MEET

Institute Track Men Place in
the I. C. A. A. A. Meet Held
Last Saturday—Final Exams
Cut Down Entries

CORNELL NUMBERS WIN OUT

Technology showed its strength in track last Saturday when it took sixth place in the championship contest of the Collegiate Association of Amateur Athletes of America which was held at Philadelphia. Cornell University won the meet, as was expected, partly because of its good first-rate string of track men, but chiefly through its ability to put a large number of contestants in the field. The Institute was greatly hampered because only a few men could compete, final examinations preventing the majority of the track team from entering. The Cornell men piled up a score of 47 points, many of which were due to fourth and fifth places.

The University of Pittsburgh was second with 30 points. Dartmouth won third with 26 points; Princeton, 19; Pennsylvania, 18; Technology, 13; Columbia, 12; Johns Hopkins, 5; Lafayette, 5; Penn State, 5; Amherst, 3 1-2; Brown, 3; Yale, 3; Rutgers, 2 1-2; Harvard, 2; Swarthmore, 1.

Halfacre '19 made a wonderful race in the mile run but was beaten out at the tape by about two yards. He set the pace at the start, as is his usual custom, and held a good lead until the last quarter, when Kleinspehn of Lafayette spurred and finished first after a hard struggle.

McMahon '20 finished third in the two-mile run, which was won by the Cornell star, Dresser. All the other places in this event were captured by Cornell runners, showing what a superiority of numbers did for that entry.

Bawden '21 finished fourth in the half mile race, beating out several Cornell men by a strong finish. This race was somewhat of a surprise to the dopsters for Mayer of Cornell, who was expected to win by the Cornell coach, was defeated by several feet by Shaw of Columbia. Shaw was well behind throughout the greater part of the race, but at the last stretch he lunged ahead, finishing first with a time of 1 minute, 56 4-5 seconds.

Bossert '20 finished fourth in both the 100 and 220-yard dashes. Ganzmuller of Penn State won the first of these in the slow time of 10 1-5 seconds, the oppressive heat preventing faster time, for the thermometer registered ninety degrees in the shade. Haymond of Pennsylvania won the 220-yard dash in slow time.

Cornell was especially strong in the hurdles, broad jump and two-mile events, scoring 12 points in the distance run, 10 in the board, 9 in the low hurdles and 7 in the high hurdles, totaling two firsts, four second, two thirds, five fourths and five fifths.

Pittsburg's points were well scattered, capturing first in the quarter-mile and hammer throw, and divided first in the pole vault with Dartmouth. Dartmouth

(Continued on Page 8.)

ALL SHIPYARD WORKERS ARE ELIGIBLE FOR BEMIS PRIZES

The Technology Committee on Shipyards Employment announces that all men working in shipyards this summer will be eligible for the prizes recently offered by Mr. A. F. Bemis, whether or not the students obtained their positions through the committee at the Institute. However, the men who have not received jobs through the local committee will not be considered in the competition for the prizes unless they register their names with the committee before June 20, 1918. Correspondence of this nature should be addressed to the Technology Committee on Shipyards Employment, care of The Tech, Charles River Road, Cambridge, Mass.

The Tech

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The Editor-in-Chief is always responsible for the opinions expressed in the editorial columns, and the Managing Editor for the matter which appears in the news columns.

IN CHARGE THIS ISSUE

C. A. Clarke '21

H. Kurth '21

WEDNESDAY, JUNE 5, 1918

IF YOU DON'T KNOW—KEEP QUIET!

CRITICISM and discussion of governmental policies in wartime may be valid or may be harmful. It all depends upon the judgment and information possessed by the individual who does the talking.

The much exercised American prerogative of free speech has found and will continue to find a vast field for its outlet in war situations. College students and college professors—the same as everyone else—are talking about the war. Nor is it wrong that they should be. They may be, it is true, great offenders if they take a stand on grounds of ignorance or misinformation. But college men and women may just as truly be powerful defenders if they labor in the promotion of accurate knowledge about the war,—defenders of the Allies, of their own country, and of the colleges as places of learning.

There is nothing more ludicrous or pathetic than to hear a man argue about some great question of the World War about which he possesses absolutely no definite information. True, even the highest officials and greatest thinkers cannot tell us definitely of the future. But what knowledge there is available of the past and present should be a constant field of inquiry for the college man.

The United States Government, fully realizing the importance of the dissemination of correct knowledge, has through the Committee on Public Information, issued the War Information Series of pamphlets. These handbooks are issued because of a belief that "this war is not to be won by an established doctrine nor by an official theory, but by an enlightened opinion based upon truth," and furthermore that "the facts of history and life are the only arsenals to which Americans need resort in order to defend the justice of their cause."

Fellows, it is up to you to get busy and know what is going on here as well as over there. (You, especially, will be expected to know the facts. Your opinion will be highly regarded). See that you are better acquainted with them the next time you expostulate what you would do if you were "President."

In another column of this issue is a review of the type of work being done by the American University Union. The Technology Branch of the same, and the Women's Auxiliary here in Boston. While we are doing our best at school there are others doing their best for the Technology men abroad who are doing their best for their country. In addition, the wives of men interested in Technology are doing their part on this end to keep the men supplied with a few comforts and home-like influences. All praise to their work and efforts. Those who are able should help them financially and all others should give them their sound support. Even that helps.

ZIRCONIUM AND ITS ALLOYS ARE NOW EXTENSIVELY USED

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The layman would hardly know that baddeleyite and jacupirangite are different names of the same thing—in fact he would probably not recognize either of these impressive words and would find their pronunciation difficult, but they are the correct mineral names for the ore of zirconium, which is found in Brazil and is said to occur there in enormous quantities.

The mineral zircon, a silicate of zirconium, is probably most familiar as a gem stone, and when so used is known as hyacinth, jacinth, jargon, or Matara diamond.

Zirconium minerals are used chiefly as refractory material, which melts only at an extremely high temperature and is very resistant to the action of fluxes and slags. Zirconium fire brick promises to be extensively used. The fused oxide of zirconium expands so little on being heated that crucibles, muffles, combustion tubes, and similar articles made of it are not broken by sudden changes of temperature.

COMMUNICATION.

To the Editor of THE TECH:

I am very anxious to get hold of a number of college boys for the three Bethlehem plants under my control. I should like very much to get a few of your graduates this year, who could expect to continue along with us, and I should also like to get quite a number of students who have not as yet reached their Senior year, and who would work with us during the summer. I could use men of this sort in any of the three following plants.

Black Rock Works at Buffalo, N. Y., where we are making turbines to drive the United States Government Torpedo Boat Destroyers. The shop at Buffalo will employ about 2500 men, and is producing entirely Government war work, so that any men you sent here would have the feeling that they were engaged in an important capacity.

Field's Point Works at Providence, R. I., where we are making boilers and condensers for the Destroyers. This plant will employ about 1000 men and is also engaged in nothing but Government work.

Moore Plant at Elizabeth, N. J., which is a complete shipyard with machine shop, foundry, pattern shop, etc. This plant is a small one, as shipyards go today, employing about 3000 men. I should like to get men to put in all of the different departments there, but particularly in the shipyard.

I can arrange to pay these men fairly liberally, which would enable any who are working their way through college to save up a little money during the summer, as well as getting some very excellent experience and helping out in the war. Will you kindly ask any men who would care to take up this work to communicate with me by letter at the Buffalo plant.

With kindest regards, I am,

Sincerely yours,

(Signed) E. B. GERMAIN,
General Manager, Black Rock Wks.,
Bethlehem Shipbuilding Corporation,
Ltd., Buffalo, N. Y.

PERSONALS.

Albert E. Wiggins '07, a metallurgical engineer with the Anaconda Mining Company has been made general superintendent of the Boston and Montana reduction department of the company at Great Falls, Montana.

Mr. Wiggins came to Great Falls in August, 1907, directly after his graduation from the Massachusetts Institute of Technology, and began work in the testing department. He was there a little more than four years. He was assistant to Superintendent Wheeler in special research of concentration methods when he was transferred to Anaconda, coming here in December, 1911. He was assigned to special concentration engineering work in which experiments were being undertaken, and the experimental flotation work which resulted in a revolution of processes, was in his charge. When the mill was remodeled and the new process was installed he was made superintendent of concentration, the position held by him until the present change.

Mr. Wiggins was prominent in the civic and social circles of Anaconda, being a member of the school board and active in movements for the welfare of the community.

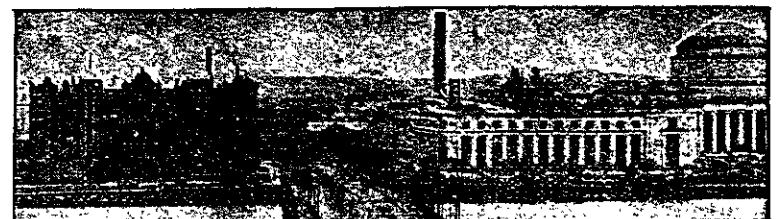
The marriage of another Technology graduate was recently announced, when Miss Margery C. Thornton, daughter of Mrs. George M. Thornton, of Pawtucket, R. I., and Albert T. Stearns '14, son of Mr. and Mrs. Albert H. Stearns of 19 Beaumont street, Ashmont, were united in holy matrimony.

Miss Thornton is a direct descendant of Roger Conant of the Massachusetts Bay Colony, and has attended the Walnut High School.

Mr. Stearns was graduated from Amherst College in the class of 1911 and from the Institute in the class of 1914. He has been a member of the chemical department of the E. I. du Pont de Nemours and Company, of Wilmington, Del., for about three years. He will take up his future residence at Nashville, Tenn.

Announcement has recently been made of the engagement of Miss Corina Codman Ely, daughter of Mrs. Cora Codman Ely of Boston, to Mr. Hall Nichols '18, son of Major and Mrs. Edward H. Nichols, also of Boston. Miss Ely made her debut in 1916 and is a member of the Sewing Circle of that year. She has devoted all of her time during the past year to Red Cross work.

Mr. Nichols prepared at Harvard and was graduated from the mechanical engineering course at Technology this year. He has just left to attend the Engineer Reserve Officers' Training Camp at Fort Lee, Virginia, and the ceremony will probably not take place until after the war.



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Spies and Lies

German agents are everywhere, eager to gather scraps of news about our men, our ships, our munitions. It is still possible to get such information through to Germany, where thousands of these fragments—often individually harmless—are patiently pieced together into a whole which spells death to American soldiers and danger to American homes.

But while the enemy is most industrious in trying to collect information, and his systems elaborate, he is *not* superhuman—indeed, he is often very stupid, and would fail to get what he wants were it not deliberately handed to him by the carelessness of loyal Americans.

Do not discuss in public, or with strangers, any news of troop and transport movements, of bits of gossip as to our military preparations, which come into your possession.

Do not permit your friends in service to tell you—or write you—"inside" facts about where they are, what they are doing and seeing.

Do not become a tool of the Hun by passing on the malicious, disheartening rumors which he so eagerly sows. Remember he asks no better service than to have you spread his lies of disasters to our soldiers and sailors, gross scandals in the Red Cross, cruelties, neglect and wholesale executions in our camps, drunkenness at d

vice in the Expeditionary Force, and other tales certain to disturb American patriots and to bring anxiety and grief to American parents.

And do not wait until you catch some one putting a bomb under a factory. Report the man who spreads pessimistic stories, divulges—or seeks—confidential military information, cries for peace, or belittles our efforts to win the war.

Send the names of such persons, even if they are in uniform, to the Department of Justice, Washington. Give all the details you can, with names of witnesses if possible—show the Hun that we can beat him at his own game of collecting scattered information and putting it to work. The fact that you made the report will not become public.

You are in contact with the enemy today, just as truly as if you faced him across No Man's Land. In your hands are two powerful weapons with which to meet him—discretion and vigilance. Use them.

COMMITTEE ON PUBLIC INFORMATION

8 JACKSON PLACE, WASHINGTON, D. C.

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The Secretary of War
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THE TECH

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I. C. A. A. A. MEET (Continued from page 1)

also captured one first, the shotput and got second in the quarter-mile and in the hammer throw.

C. R. Erdman of Princeton was high point scorer, winning both hurdles for a total of 10 points. C. Haymond of Pennsylvania compiled nine points, winning the 220-yard dash and finishing second in the 100.

F. J. Shea, the quarter-mile champion, representing Pittsburg University, also made nine points, winning the quarter easily in the good time of 47 3-5s and second in the 220-yard dash.

The summary of events is as follows: 100-Yard Dash—Won by W. H. Ganzemuller, Pennsylvania State; C. Haymond, Pennsylvania, second; F. Davis, Pennsylvania, third; T. W. Bossert, Technology, fourth; H. E. Shackleton, Cornell, fifth. Time, 10 1-5s.

220-Yard Dash—Won by C. Haymond, Pennsylvania; F. J. Shea Pittsburg, second; Fred Davis, Pennsylvania, third; T. W. Bossert, Technology, fourth; R. E. Brown, Princeton, fifth. Time, 21 3-5s.

440-Yard Run—Won by F. J. Shea, Pittsburg; J. M. Murphy, Dartmouth, second; M. Gustafsen, Pennsylvania, third; H. Staub, Columbia, fourth; W. J. Carto, Dartmouth, fifth. Time, 47 3-5s.

Half-Mile Run—Won by C. Shaw, Columbia; K. A. Mayer, Cornell, second; G. W. Albrecht, Pittsburg, third; Garvin Bawden, Technology, fourth; F. L. Abreu, Cornell, fifth. Time, 1m 56 4-5s.

One-Mile Run—Won by W. G. Kleinspehn, Lafayette; G. F. Halfacre, Technology, second; Perry Addleman, Pittsburg, third; K. D. Maynard, Cornell, fourth; Royal Shephard, Columbia, fifth. Time, 4m 24s.

Two-Mile Run—Won by I. G. Dresser, Cornell; D. F. Peck, Cornell, second; W. K. McMahon, Technology, third; R. E. Spear, Cornell, fourth; C. S. Seelbach, Cornell, fifth. Time, 9m 42 4-5s.

High Hurdles—Won by C. Erdman, Princeton; W. E. Smith, Cornell, second; G. A. Trowbridge, Princeton, third; W. H. Clemishaw, Cornell, fourth; E. N. Pratt, Cornell, fifth. Time, 15 2-5s.

Low Hurdles—Won by C. R. Erdman, Princeton; W. E. Smith, Cornell, second; W. H. Clemishaw, Cornell, third; E. B. Bickford, Cornell, fourth; G. A. Trowbridge, Princeton, fifth. Time, 24 2-5s.

Shotput Final—Won by W. C. Beers, Dartmouth, distance, 45ft 11-4in; R. F. Cleveland, Princeton, second, distance, 41ft 5in; T. E. Sinclair, Brown, third, distance, 39ft 9 1-2in; J. B. Sutherland, Pittsburg, fourth, distance, 39ft 9in; Paul Chandler, Swarthmore, fifth, distance, 28ft 3 1-2in.

Hammer Throw—Won by W. J. Sutherland, Pittsburg, 152ft 7 1-4in; L. H. Weld, Dartmouth, second, distance, 135ft 3 1-4in; K. C. Bevan, Dartmouth, third, distance, 127ft 1in; Ames Stevens, Harvard, fourth, distance, 124ft 10in; J. R. Bangs, Cornell fifth distance, 112ft 5in.

Broad Jump—Won by R. K. Felter, Cornell, distance, 22ft 6in; H. Schuler, Columbia, second, distance 22ft 3-4in; A. D. Shackleton, Cornell, third, distance, 21ft 5 1-4in; W. E. Smith, Cornell, fourth, distance, 21ft 4 1-2in; J. M. Summerill, Rutgers, fifth, distance, 21ft 1-4in.

High Jump—Won by M. Firor, Johns Hopkins, height, 5ft 11 3-8in; J. E. Hugas, Pittsburg, and M. Anderson, Amherst, tied for second at 5ft 10 1-2 in; J. F. Moriarty, Dartmouth, fourth, height, 5ft 9 1-2in; N. C. Beers, Dartmouth, fifth, height, 5ft 8 1-2in.

Pole Vault—Roy Easterday, Pittsburg, and J. Z. Jordan, Dartmouth, tied for first at 12ft 3in; Joseph Breckley, Rutgers, W. W. Webber, Yale, E. A. Myers, Dartmouth, and D. B. Ford, Yale, tied for third at 12ft.

UNIVERSITY UNION

(Continued from page 1)

ing of news of friends abroad, and countless other unrecorded, but none the less impressive, service to those college men who cross the ocean in the service of their country. The tributes paid to the work of the University Union are numerous and touching. The "home-like" interest taken in men far from their homes is a revelation to the men "over there." The Union is conducted in the most complete co-operation with both the Red Cross and Y. M. C. A. workers.

In connection with the University Union, Technology has a club which, according to all reports, is some club! There is no other college union more effective, successful or well known than our own bureau in Paris. It started as a year ago, somewhat before the University Union was organized, with which it is now affiliated. To Technology men abroad and their families at home, this bureau, with its supporting Women's Auxiliary in Boston, has been a God-send. The Alumni can only with

difficulty grasp the complete significance of this war work of the Tech Bureau and the Women's Auxiliary. At the Auxiliary headquarters in the Rogers Building, 491 Boylston street, there is a workroom where friends of the Institute do knitting and sewing for men in service. The work is carried on by financial contribution of the Alumni and the co-operation of wives and friends of Technology graduates and Technology professors. This work began through the generous contributions of a few specially interested individuals, and it has been furthered by contributions, which up to April 1, 1918, totalled \$14,000. Expenditures have amounted to very nearly \$13,000.

The articles sent out from the workroom to April 1 are 118 blanket wrappers, 234 suits of pajamas, 390 pneumonia jackets or pads, 713 pairs slippers, 894 pairs day-socks, 1466 other knitted garments, 258 surgical shirts, 896 garments for refugees, 4340 toilet and hospital supplies, 552 filled comfort bags, 1428 books, papers, and magazines, 1 Victrola and 46 records.

Chocolate, coffee, nut-fruit ration, games, gloves, bags of several kinds have also been distributed, making a total of 11,929 garments and other supplies distributed. One trunk full of garments was lost on a torpedoed ship.

There is another type of work carried on by the Women's Auxiliary which is even more directly appreciated. This consists of the countless human interests which are taken in the "boys" and their families. Such things as pictures of the burial place of a lost son, news from missing men, and comfort to the families which have lost members, are the services which are calling forth the heartfelt appreciation of the work of the women interested in Technology. In order to be in as advantageous a position as possible to communicate with Technology men a catalogue (the most complete one obtainable) is kept with as complete a history as possible of the movements of each man from the time of his enlistment. From this catalogue the following figures are obtainable, corrected to May 24:

Total number of men in service, 2252; in foreign service, 562; aviation, 379; navy, 452; officers, 1413; officers training camps, 137; inspectors or instructors, 108; ambulance, Y. M. C. A. Red Cross, etc., 108; A. E. F. 55; Deaths, 36.

The active personnel of the Women's Auxiliary Workroom Committee is as follows:—Mrs. Edward Cunningham, Chairman; Mrs. W. T. Sedgwick, Director; Miss Evelyn Walker, Assistant Director; Mrs. Robert P. Bigelow, Treasurer; and Mrs. Ralph Adams Cram, Professor Harry W. Gardner, Mrs. Harry M. Goodwin, Mrs. Charles T. Main, Mrs. Everett Moss, Mrs. James P. Munroe, Professor William T. Sedgwick.

The Central Committee consists of Mrs. Edward Cunningham, Chairman; and Miss Mabel E. Babcock, Mr. Albert F. Bemis, Professor Henry Fay, Mrs. Harry M. Goodwin, Mrs. Frederick T. Lord, Professor Harry W. Tyler, Miss Evelyn Walker, Mrs. Edwin S. Webster, Mrs. A. J. George, Executive Secretary; Miss Frances R. Porter Filing Secretary.

WYMAN KILLED

(Continued from page 1)

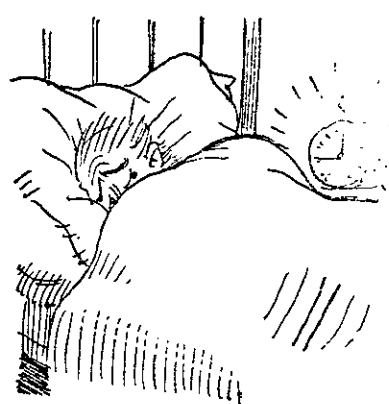
Lieut. Wyman was born in Fitchburg in 1893 and attended the Fitchburg High School, where he prepared for Technology. He graduated from the Institute with the Class of 1916, completing the course in Architecture. He also studied his profession for a time in France.

In July of 1917, while employed as a tutor in New York, Lieut. Wyman applied for a commission in the United States Army, preferring the cavalry branch of the service. Not hearing promptly from the War Department he crossed the line into Canada and enlisted in the Royal Flying Corps at Toronto. He received a commission as a Lieutenant, his ability to handle airplanes having been recognized by the Canadian War Department and was selected as a pilot for fighting planes. After he had received his commission, Lieut. Wyman was notified by the United States War Department that he had been commissioned a lieutenant in the American army, but he decided to remain with the Flying Corps rather than go into the infantry. He left for England after a short period of intensive training at Toronto and took up active flying with the English planes. It was while operating one of these that he was killed.

Lieut. Wyman was one of six brothers, four of whom are now fighting against the Germans. Three of the boys are in the United States Aviation Corps and the fourth is in the Medical Corps.

TENNIS TEAM ELECTIONS

The following men have been elected as officers of the Technology Varsity Tennis Team: L. E. Boyden '20, manager; W. Kimball '19, captain.



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| Dark Creosote | Remover |
| Dead Oil | Py-ra-lin Enamels |
| Dinitrophenol | Refined Aceton Oil |
| Ether, U. S. P.—1910 | Refined Creosote |
| Ethyl Acetate | Refined Fusel Oil |
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FUNERAL SERVICE HELD FOR KAISER AT SHIPYARD SMOKER.

At the Shipyard Smoker, held last week, the funeral services of Wilhelm von Hohenzollern were delivered by a committee of Technology joy-killers before a congregation of sad and pathetically inclined students. It is hoped that the ensuing funeral masterpieces will not, on account of the lapse of time since the heart-rending exercises, cause any serious results.

As the pall bearers bore the black-veiled casket into the presence of the attendants the following invocation was delivered by the undertaker:

Who'll can the Kaiser?
I, said Uncle Sam,
I'm the man, I am,
I'll can the Kaiser!

Who'll catch the Beast?
I said La Belle France,
I'll stop his mad dance,
I'll catch the beast!

Who'll pull his teeth?
I said John Bull,
Because I can pull,
I'll pull his teeth.

Who'll toll the bell?
I will said Italy,
I'll toll it loud and prettily,
I'll toll the bell!

Who'll escort him down to Hell?
I, said the Crown Prince,
I'm due there long since,
I'll escort him to Hell!

Who'll build the coffin for him?
I, said the Institute,
I'll help lay out the brute,
I'll build the coffin!

Who will drive in the nails?
I, said the Shipping Yard,
I'll hammer long and hard,
I'll drive the nails!

And all the devils in Hell
Fell to laughin' and scoffin'
When they heard the nails driven
In the Kaiser's coffin.

At the conclusion of the service the benediction was delivered amid the sighs and groans of the multitude, while in sonorous tones the following epic resounded through the halls of death:

This is the coffin the Tech men built.
This is the Kaiser who lies in the coffin the Tech men built.

This is the war that cann'd the Kaiser who lies in the coffin the Tech men built.

These are the ships that carried the men that won the war that cann'd the Kaiser who lies in the coffin the Tech men built.

These are the allies who needed the ships that carried the men that won the war that cann'd the Kaiser who lies in the coffin the Tech men built.

This is Belgium all forlorn who saved the allies who needed the ships that carried the men that won the war that cann'd the Kaiser who lies in the coffin the Tech men built.

This is France and England, tattered and torn who fought for Belgium all forlorn who saved the allies who needed the ships that carried the men that won the war that cann'd the Kaiser who lies in the coffin the Tech men built.

This is America sturdy and strong who helped France and England tattered and torn who fought for Belgium all forlorn who saved the allies who needed the ships that carried the men that won the war that cann'd the Kaiser who lies in the coffin the Tech men built.

These are the Tech men who labor long to aid America sturdy and strong who helped France and England tattered and torn who fought for Belgium all forlorn who saved the allies who needed the ships that carried the men that won the war that cann'd the Kaiser who lies in the coffin the Tech men built.

built.
that won the war that cann'd the Kaiser

TOTAL ECLIPSE OF SUN

(Continued from page 1)

of a triangle which has Betelgeux and Aldebaran as its base, the great planet Jupiter will glow with unwinking eye; the sun, now a jet circle, hanging between Jupiter and Aldebaran.

On the very rim of the sun's black-

ened disk will be seen for a few moments flickering spots of rosy light, faint points of red flame, in reality tens of thousands of miles high. And something else will be seen around which the whole interest of the eclipse will centre: the sun's corona, a halo or aureole of pearly light, stretching forth millions of miles into space; an aureole not symmetrical in outline nor of fixed form, but with huge, dim streamers stretching out from it, strongly recalling the streamers of the northern lights, the aurora borealis, and equally mysterious. Then, after two minutes' darkness, a thin, radiant rim of sunlight will reappear, instantly blotting out the corona; Jupiter and the stars will fade; the rim of radiance will steadily grow, rounding out the circle, and, an hour later, the setting sun will be once again a complete luminous disk.

As the circle of black sweeps across the continent from west to east, gradually shrinking, the period of total darkness will grow less, lasting, at Denver, a minute and a half; in the State of Mississippi a minute, in Florida only fifty seconds.

North and south of the track of the blot of shadow, the darkness will not be complete; or, looking at the sun, one will see its disk only partly blackened; for every thirty miles from the shadow's path, 1 per cent. of the sun will be added to the part which remains luminous; thus, 300 miles north or south of the path of blackness one-tenth of the sun will shine at the moment of greatest darkness. Only some 3,000 miles from the path of darkness will the whole sun remain clear. Since, northward of the line, this takes us well up into the arctic, therefore the whole of North America will see the eclipse, whether as total (at all points within the shadow path) or as partial. At Boston, it will begin at 6.31 P. M. (Eastern time) reaching the maximum at 7.23, and ending at 8.12, 63 per cent. of the sun being darkened.

At New York, the eclipse will begin at 6.32 P. M., culminate at 7.26, and end at 8.16, with 68 per cent. of the sun hidden. At Philadelphia, it will begin at 6.32, reach the maximum at 7.27, and end at 8.18, 71 per cent. of the sun being eclipsed.

At Raleigh, N. C., the eclipse will begin at 6.36, culminate at 7.33, and end at 8.26, with 82 per cent. of the sun hidden. At Tallahassee, Fla., it will begin at 5.40 (Central time), culminate at 6.40, and end at 7.35, with 99 per cent. of the sun covered. Immediate south of this eclipse will be total.

This, broadly, is what takes place. What is the cause? The sun is a globe 800,000 miles in diameter, so that 100 earths, strung on a wire, would just stretch from the north to the south pole of the sun, within its globe. And the sun revolves about once a month. Some 93,000,000 miles away, the earth and the moon circle around the sun, the earth about 8,000 miles from pole to pole, the moon about 2,000; four moons strung on a wire would just reach from our north to our south pole, within the earth. Or, seen from the moon, the earth looks four times as large across its face as the moon does when seen from the earth; so, seen from the moon, the earth is a huge globe, its continents and oceans quite plainly visible, when not hidden by clouds. Lunar children, if there were any, would find it charming to study geography.

Both earth and moon, illumined by the huge sun, throw long cones of shadow into space, away from the sun. The shadow-cone of the moon comes to a point some 240,000 miles behind the moon, and is sharply defined because the moon has no thick layers of air about it, to soften the rim of the shadow, as has the earth. Now, it happens that the moon circles about the earth at almost that distance (240,000 miles) from the earth. Therefore, when the moon, on its circular path, passes immediately between the sun and the earth, the point of its shadow-cone draws a black blot across the earth, the very circle of darkness whose passage across the continent we have traced. Looked at from within the blot or shadow, the dark moon just covers the sun, cutting off all its light, and thus allowing the corona, the sun's aureole, to be seen; at all other times the corona is blotted out by the sun's brightness.

But the moon does not keep at a quite equal distance from the earth; so, when she is a little further off, her dark disk will not quite cover the sun which, at the culmination of an eclipse, will then show as a rim of brightness around the moon's disk, causing an annular or ring-like eclipse. Nor does the moon always pass directly between sun and earth; her path sways slightly, so that she sometimes passes above the sun in the sky, sometime below; in fact, the moon passes directly across the sun from once to four or five times only in each year, so that the sun is eclipsed at least once, at most four or five times, in any year. Nor are all these eclipses total; nor, at total eclipses, does the circle or shadow always pass across convenient regions, as it will next Saturday; it may run over the arctic regions, or waste

its sweetness on the South Pacific, gladdening remote Easter Island. Of Saturday's eclipse two-thirds will be lost in the Pacific, between Japan and the Columbia River.

And here comes an odd point about this eclipse; it really begins at sunrise on June 9, at the Island of Borodino, off the coast of Japan, and rushes out across the Pacific; then the circle of shadow (the point of the moon's shadow-cone) crosses the "road to yesterday" (the 180th meridian of longitude,) and finds itself on June 8, reaching our Pacific Coast in what is there the afternoon. Next year there will be a total eclipse of the sun on May 28, when the blot of darkness will flit down the Amazon Basin, cross the Atlantic to the Congo Basin, and finally reach Lake Tanganyika.

In fact, since the American civil war there has been no eclipse so convenient for us as the present one. Groups of eclipses recur in a period of 18 years 11 1/3 days, so that the present eclipse is the reincarnation (if you wish to call it so) of the eclipse of May 28, 1900.

MINING DEPARTMENT BALANCES ACCURATE TO .00001 OF A GRAM

Did you ever stop to consider how much a lead pencil mark about one-third of an inch long weighs? There are some balances in the Department of Mining Engineering which are delicate enough to determine accurately the weight of such a mark, and which are used to determine the weight of pieces of gold about one-third as large as the head of a pin. Such instruments can determine weights accurately to five decimal places, or in other words, to hundredths of a milligram.

The reason for such accurate measurements becomes evident when we stop to consider a concrete example. A ton of good grade ore contains in the region of one and seventy-five hundredths ounces of the pure metal. To men buying or selling ore it would mean a considerable loss if measurements were made to only one decimal place. This would amount to a difference of several dollars in the value of an ounce. Measurements are therefore made to the hundredths of an ounce, and a slight difference in calculation would only mean an error of about twenty cents in the value of an ounce of gold. Consumers and sellers could easily come to an agreement under these conditions.

In determining the weight of pure gold in a ton of ore, one assay ton which weighs 29.166 grams, is used. To calculate the value of this gold within a twenty cent margin, the ore must be weighed to one one hundredth of an ounce per ton. Since there are 29.166 troy ounces in a ton, the result must be determined to one part of gold in nearly three million parts of ore. After the assay ton has been weighed out, the gold is extracted and weighed. In order to get the required precision, the extracted gold must be weighed to one one hundredth of a milligram, which is equivalent to five decimal places. This is about the weight of a lead pencil mark.

To determine the weight of a lead pencil mark, a small piece of paper is weighed as accurately as possible. Then a mark about one centimeter in length is made on the same paper. The difference between the weight of the paper plus the pencil mark and the paper alone is calculated, and the result, which is about one two hundredths of a milligram, is the weight of the mark.

There is a distinction between a balance and a scale. In the former the distances from the fulcrum to the ends are equal, while in the latter there is some means of obtaining a leverage on the substance or thing to be weighed. It is difficult to manufacture the parts of a delicate balance. Both sides of the beam must be of the same weight and length, and it is very seldom that the parts are made correctly the first time. Most of the balance is made of brass, and in order to correct any differences, the parts which are supposed to be of the same size are weighed with the same counter-balance. If the parts are tapped lightly with a hammer, they expand slightly, and small errors can be corrected in this manner. The beam, which pivots, rests pieces of agate sharpened to a knife edge. After the balance is set up, it is enclosed by a glass case which is proof against air currents.

In operating such an instrument aluminum weights are used as a counter balance because they are practically unaffected by the atmosphere and the very small pieces of the metal which are used can be easily seen. A correct result cannot be obtained while the beam is stationary. In order to move the beam, the door of the case is raised about one-sixteenth of an inch, and a slight movement of the hand is sufficient to produce an air current which gives the desired result. In operating the balance, it is necessary to guard against touching either the weights or the materials to be weighed with the fingers, for the moisture on one's hand is sufficient to spoil the result.

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